



## Purpose and Applicability of Water & Wastewater Regulations

Many small businesses generate wastewater that must be discharged or treated in accordance with local, state, and/or federal requirements. This chapter discusses wastewater permitting, operator training requirements, and also identifies wastewater regulatory agencies and common water and wastewater issues.

## Goals of the Wastewater Permit Programs

Protecting our water resources is both an environmental and public health necessity. At the federal level, the U.S. Environmental Protection Agency, the U.S. Department of Interior, the U.S. Department of Agriculture, and the U.S. Army Corps of Engineers each have a role in protecting Indiana's water resources. In Indiana, the Indiana State Department of Health (ISDH), the Indiana Department of Natural Resources (DNR), and the Indiana Department of Environmental Management's Office of Water Quality share that responsibility.



### ■ Indiana State Department of Health

ISDH is responsible for providing training and technical assistance to county health departments regarding residential septic systems and for issuing construction permits to all commercial on-site non-discharging sewage disposal systems. The various county health departments issue residential septic system permits. Some counties also may require a county-issued construction permit for commercial on-site non-discharging sewage disposal systems.

### ■ Indiana Department of Natural Resources

DNR's Division of Water is charged by the state of Indiana to maintain, regulate, collect certain data for, and evaluate Indiana's surface and ground water resources. The Division of Water is comprised of 17 sections divided between three branches: Engineering, Planning, and Regulation. The Division of Water issues permits for:

1. Alteration of the bed or shoreline of a public freshwater lake;
2. Construction or reconstruction of any ditch or drain having a bottom depth lower than the normal water level of a freshwater lake of 10 acres or more and within half a mile of the lake;

3. Construction within the floodway of any river or stream;
4. Placing, filling, or erecting a permanent structure in; water withdrawal from; or material extraction from a navigable waterway;
5. Extraction of mineral resources from or under the bed of a navigable waterway; and
6. Construction of an access channel.

DNR's Division of Reclamation is responsible for implementing the federal Surface Mining Control and Reclamation Act (SMCRA). The Division of Reclamation issues permits to coal mining companies, which allows them to mine coal in Indiana. The Division of Reclamation works closely with IDEM to protect the waters of the state through the issuance and enforcement of construction permits and National Pollutant Discharge Elimination System (NPDES) permits. The Division of Reclamation has primary responsibility for the compliance and enforcement of all coal mining and wastewater permits.

#### ■ Indiana Department of Environmental Management

IDEM's Office of Water Quality implements and enforces the federal Water Pollution Control Act (as amended), which is also referred to as the Clean Water Act. With oversight from U.S. EPA Region 5, the Office of Water Quality's Permits Branch assumed responsibility for this permit program in 1975.

The Clean Water Act prohibits the discharge of a pollutant into the "waters of the United States" as a point source discharge without an NPDES permit. NPDES is the national program for issuing, modifying, revoking and reissuing, terminating, denying, monitoring, and enforcing permits for the discharge of pollutants from point sources and imposing and enforcing pretreatment requirements by the U.S. EPA administrator or IDEM commissioner.

When IDEM assumed responsibility for managing the NPDES program in 1975, its jurisdiction included all the waters of the state of Indiana. Waters of the state means such accumulations of water, surface and underground, natural and artificial, public and private, or parts thereof, which are wholly or partially within, flow through, or border upon this state. However, the term does not include any private pond, or any pond, reservoir, or facility built for reduction or control of pollution or cooling of water prior to discharge unless the discharge causes or threatens to cause water pollution.

The Office of Water Quality's Permits Branch issues NPDES permits to help ensure that a variety of wastewater dischargers in Indiana comply with the Clean Water Act. It also issues construction permits for facilities needing to construct, install, or modify any water pollution treatment control facility or sanitary sewer.

## The Regulated Community: Who Needs an NPDES Permit?

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An NPDES discharge permit also serves as an operating permit, under which the owner/operator generates and/or collects wastewater for discharge. In most cases, in order for that discharge to meet the standards required by the NPDES discharge permit, it first must be treated.

The construction, installation, or modification of any facility used for wastewater treatment requires that a construction permit also be obtained from the Office of Water Quality's Permits Branch. In addition, any extension of a sanitary sewer line also requires a construction permit. Those persons proposing to build or operate an actual facility which may need a permit should consult the Indiana Code, the Indiana Administrative Code, and the Office of Water Quality's Permits Branch at (317) 232-8706 or (800) 451-6027, ext. 2-8706 for a more complete discussion of permitting requirements within Indiana.

For more detailed information, including information on pretreatment permits, please refer to IDEM's Web site at [www.idem.IN.gov/4874.htm](http://www.idem.IN.gov/4874.htm).

### *Construction in a Wetland, or Placing Dredge or Fill Materials in a Wetland*

Any person who wishes to place fill materials, excavate or dredge, or mechanically clear (use heavy equipment) within a wetland, lake, river, or stream must first apply to the U.S. Army Corps of Engineers for a Section 404 permit. For more information, please refer to IDEM's Web site at [www.idem.IN.gov/4391.htm](http://www.idem.IN.gov/4391.htm).

The U.S. Fish and Wildlife Service has created national wetland inventory maps which identify the general location of wetlands. For more information, please visit IDEM's Web site at [www.idem.IN.gov/4406.htm](http://www.idem.IN.gov/4406.htm).

### *Storm Water Discharges from Industrial and Construction Sites*

Storm water runoff from sites involved in industrial or construction activities may require a general or individual storm water runoff permit from IDEM's Office of Water Quality.

### *Cooling Water Discharges*

Anyone discharging non-contact cooling water—water that is used for the sole purpose of removing unwanted heat, and does not come into contact with industrial processes and materials and is not co-mingled with other wastewater—from a point source into the waters of the state must first obtain an NPDES permit.



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#### FOR MORE INFORMATION

- Wastewater permitting for industrial discharges and storm water discharges
- Industrial storm water discharges
- Storm water runoff associated with construction and land-disturbing activities
- Cooling water discharges

[www.idem.IN.gov/4896.htm](http://www.idem.IN.gov/4896.htm)

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### *Discharges Associated with Certain Petroleum-Related Activities*

Wastewater discharges associated with certain petroleum-related activities may be required to obtain a general NPDES permit under 327 IAC 15. For more detailed information, refer to IDEM's Web site at [www.idem.IN.gov/4883.htm](http://www.idem.IN.gov/4883.htm).

### *Permitting Wastewater Discharge from Mines and Quarries*

You need an NPDES general permit from IDEM if you are planning on discharging, or are currently discharging, wastewater from a:

- Coal mine
- Coal processing facility
- Coal mine reclamation area
- Sand quarry
- Gravel quarry
- Dimensional stone quarry
- Crushed stone quarry

Anyone planning a point source discharge of wastewater or runoff from a coal mine, coal processing facility, or coal mine reclamation area, or from a sand, gravel, dimensional stone, or crushed stone quarry, must first secure an NPDES permit. For more detailed information, refer to IDEM's Web site at [www.idem.IN.gov/4883.htm](http://www.idem.IN.gov/4883.htm).

## **Types of NPDES Permits Issued by IDEM's Office of Water Quality**

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The Permits Branch of IDEM's Office of Water Quality issues several types of NPDES permits. For more information, please refer to IDEM's Web site at [www.idem.IN.gov/4894.htm](http://www.idem.IN.gov/4894.htm).

### **Publicly Owned Treatment Works (POTWs) and Municipal Semi-Public or State Permits**

#### **Purpose:**

POTWs treat and disinfect municipal wastewater prior to discharge.

#### **Types:**

- Major Discharge (More than 1 million gallons/day)  
(requires NPDES application form 2A)
- Minor Discharge (Less than 1 million gallons/day)  
(usually semi-public, minor municipal, state, or federal dischargers)

Prior to enactment of the 1972 federal Water Pollution Control Act, many municipalities were served by primary sewage treatment plants that did little more than remove solids. After 1972, all POTWs were required to provide secondary treatment.

## Industrial Wastewater Treatment Facilities and Other Industrial Discharge Permits

### Purpose:

Industrial NPDES permits limit the levels of contaminants in industrial process water that may be discharged into waters of the state. Individual industrial NPDES permits cover these types of discharges:

### Types:

- Process wastewater from existing dischargers (requires NPDES application form 2C).
- Process wastewater from new sources and new dischargers (requires NPDES application form 2D).
- Non-process wastewater from new and existing dischargers (e.g., noncontact cooling water) (requires NPDES application form 2E).
- Storm water runoff associated with industrial activity discharges which have intermingled with non-storm waters or come into contact with certain wastes, discharges from certain facilities subject to federal storm water effluent limitations guidelines, or discharges into receiving streams and waters listed as outstanding state resource waters or as exceptional use streams. Other runoff associated with an industrial activity is eligible for a Rule 6 general NPDES storm water runoff permit (requires NPDES application form 2F).
- Concentrated animal feeding operations (CAFOs) (requires NPDES application form 2B).

CAFOs are point sources subject to the NPDES permit program. The CAFO NPDES permit program is administered by IDEM's Office of Land Quality. The two types of permits available to CAFOs are individual and general NPDES permits. To learn more, visit IDEM's Web site at [www.idem.IN.gov/4994.htm](http://www.idem.IN.gov/4994.htm).

Unless notified by the IDEM commissioner that the CAFO has no potential to discharge in accordance with 327 IAC 5-4-3.1, all CAFO owners or operators must seek coverage under either an individual NPDES permit or a general NPDES permit under 327 IAC 15-15.

## Aquaculture Discharges

Aquaculture, or concentrated aquatic animal production facilities, as defined in 40 CFR 122.24, also are point sources subject to NPDES permit requirements. However, the need for such a permit is based on an on-site inspection that determines whether a permit is required, based on such factors as:

- The location and quality of the receiving waters;
- Whether the facility is a significant contributor of pollution to waters of the state; or

- If the holding, feeding and production capacities of the facility are such that it is determined that the facility does not need an NPDES permit because:
  - The aquatic animals are raised in a structure that discharges less than 30 days per year; and
  - Produces less than 20,000 pounds of cold water, or 100,000 pounds of warm water aquatic animals per year.

Discharges into aquaculture projects, as defined in 40 CFR 122.25, also are subject to the NPDES permit program. However, this applies only to those operations which feature the confinement of aquatic animals within the waters of the state or the waters of the United States.

### Industrial Wastewater Pretreatment Permits (IWPP)

IWPPs are for industrial process wastewater that is treated to remove contaminants prior to discharge into a municipal wastewater collection system. Treatment is similar to that associated with NPDES industrial permits, but the effluent is discharged into a municipal sewer rather than directly into a stream or other body of water. As a result, this wastewater receives further treatment at the municipal facility prior to being discharged to waters of the state.

Currently, 45 Indiana municipalities have U.S. EPA-delegated pretreatment programs in place, under which they regulate industrial discharges to their municipal wastewater collection systems. In addition, IDEM issues IWPPs to industries in those towns and cities that do not have a local pretreatment program in place. Although it is under no specific time requirement, IDEM usually processes IWPP applications in less than 60 days. IWPP effluent standards are derived from:

- Federal categorical standards, which are either “industry specific,” or based on “units per gallon” of effluent.
- POTW calculations, which derive effluent limits by back calculating the amount of pollutant loads available to industry, taking into account the available additional capacity of the POTW before its capabilities are exceeded. This method is frequently used for smaller POTWs.
- Local limits established in a pretreatment program ordinance. This option is used for non-categorical industries by the 45 municipalities with U.S. EPA-approved pretreatment programs in place. However, in some instances, smaller communities may also have local limits that are used even though IWPPs are issued by IDEM.



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#### FOR MORE INFORMATION

- Dredging permits
- Wastewater facility construction permits

[www.idem.IN.gov/4221.htm](http://www.idem.IN.gov/4221.htm)

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## ■ Obtaining an Individual NPDES Permit

### *What Information Does the Permit Application Request?*

All IDEM applications require relevant administrative information. Below is a partial list of some technical information also requested.

#### 1. For Industrial Facilities:

- Process-related contaminants that can be expected (use Standard Industrial Classification [SIC] code).
- Highest monthly average flow.
- Treatment technologies applied.
- Operational and compliance history.
- Production data from past two years.
- Effluent toxicity for major discharges.

#### 2. For POTWs:

- Treatment capacity for which the facility was designed.
- Loading rates (i.e., rate at which each component of a facility is designed to operate).
- Treatment technologies applied.
- Operational and compliance history.
- Plant design and percent removal for:
  - Biological Oxygen Demand (BOD),
  - Suspended solids, and
  - Nitrogen and phosphorus (when necessary).
- Characteristics of contributing industrial waste (if any).
- How treated effluent will be disinfected.

### *How is the Individual NPDES Permit Application Reviewed and the Permit Written?*

The IDEM permit writer must develop a permit based on the effluent limits, which will be required at the outfall (the end of the discharge pipe), and in the mixing zone of the receiving stream (where the effluent mixes with the stream). Those limits are determined by modelers, using the data describing the receiving stream in a model, or simulation, to determine the level of pollutants that can be discharged without adverse effect on the receiving stream, especially during low flow conditions.

Once the modelers have calculated proposed effluent limits, the IDEM permit writer has two primary tasks:

1. To collect the information necessary to develop permit conditions, such as the effluent limits, whole effluent toxicity testing, proposed monitoring frequency,

- sample types, schedule of compliance (in the event compliance is required) and best management practices; and
2. To develop and justify the monitoring frequency, sampling, and compliance conditions of the permit.

### *What Does an Individual NPDES Permit Do?*

Although individual NPDES permits are somewhat unique, they each:

- Authorize discharges, which are limited to levels set by the permit.
- Set limits for daily maximum discharges.
- Require monitoring and reporting by the permittee of discharges of specific contaminants at specific outfalls.
- Establish sampling protocol and frequencies.
- Require record retention.
- Outline the permittee's duty to furnish additional relevant information and allow inspections.
- Define upset conditions and establish required compliance schedules for bringing the facility back into compliance after an upset.
- Establish penalties for permit violations and requirements for mitigating adverse impacts on the environment.
- Establish penalties for the falsification of reports.
- Provide a rationale for effluent limits.
- May require other actions, such as the development of combined sewer overflow plans and/or storm water pollution prevention plans, or industrial pretreatment program development and implementation.

### *How are the Requirements of an Individual NPDES Permit Usually Met?*

For Municipal Publicly Owned Treatment Works (POTWs):

Streams have naturally occurring microorganisms capable of breaking down, or consuming, contaminants. This, along with the rate and volume of stream flow, oxygen level, temperature and other naturally occurring conditions, enable streams to break down, absorb or cleanse themselves of contaminants.

Modern municipal POTWs mimic this ability. They depend on, and are limited by, the same balance of loading capacity, volume of flow, and other factors as any stream. However, they are designed to manipulate all these factors in such a way as to optimize the process and, thus, maximize the volumes of contaminated wastewater that can

be treated within the limits of this otherwise natural phenomenon. Thus, the level of contaminant breakdown, adsorption, and self-cleansing that might occur during 20 or 30 miles of downstream flow can instead be compressed into the volume of a POTW. It functions like “a stream in a box,” enabling us to break down and remove contaminants, but before they reach the receiving stream.

All municipal POTWs utilize a secondary treatment process to meet effluent limits contained in their NPDES permit. Most municipal POTWs may use a combination of the following treatment techniques:

- **Preliminary Treatment:**  
This usually consists of processes that remove inorganic grit and sand from the wastewater. In addition, preliminary treatment processes include fine screening to remove large solids. Grinders also reduce the size of larger solids.
- **Primary Treatment:**  
Some POTWs have a primary treatment process, usually clarifiers, whose main function is to remove the settleable and floatable solids. Approximately 30 percent of the biochemical oxygen demand and 50 percent of the suspended solids are removed at this stage. These solids are usually sent to a sludge digestion process, while the wastewater is sent to the secondary treatment process.
- **Secondary Treatment:**  
All POTWs use some form of secondary treatment. It is an aerobic process, thus oxygen must be supplied to encourage the growth of an adequate population of the proper microorganisms. Although the medium in which they are maintained varies, these microorganisms are central to both the activated sludge (suspended growth), or trickling filters, and the rotary biological contactors (fixed film) secondary treatment processes. These processes are followed by the use of secondary clarifiers, which enable clear water to be separated from the suspended solids utilized in the secondary treatment process.

Some POTWs, especially facilities designed for smaller communities, rely on a pond or lagoon system for secondary treatment. These facilities are designed to provide longer detention times—usually 30 to 120 days—during which microorganisms break down solids and reduce biochemical oxygen demand levels. Other POTWs are required to meet effluent limits more stringent than can be provided by typical secondary treatment processes. These facilities use additional processes to remove suspended solids, such as sand or multimedia filtration or nutrient (ammonia and/or phosphorus) removal.

All POTWs must provide for the disinfection of their treated effluent prior to discharging it into the receiving waters. Disinfection reduces the number of disease-causing microorganisms to levels that are acceptable to protect human health and the aquatic environment. The majority of POTWs use chlorination to disinfect their effluent. How-

ever, recently promulgated water quality standards now require that disinfected effluent then be dechlorinated (usually with sulfur dioxide) prior to discharge. An increasing number of POTWs are changing from chlorination to ultraviolet (UV) disinfection. The treated effluent is subjected to an intense bombardment by UV light, which kills disease-causing microorganisms.

#### *How do Industrial Treatment (or Pretreatment) Facilities Usually Meet the Requirements of an Individual NPDES Permit?*

Industrial wastewater that is sent to a POTW is treated first, to bring it into compliance with local or state industrial wastewater pretreatment program (IWPP) requirements. Industrial wastewater generators not participating in pretreatment programs are required to obtain an individual industrial NPDES permit and treat their process wastewater prior to discharging it to waters of the state. Whether they discharge under an individual NPDES permit, or participate in an IWPP program, industrial users generate a wide range of differing types of wastewaters, requiring treatment from a broad array of treatment options. However, the fact that each regulated facility has near total control of its manufacturing process helps reduce substantially the anticipated treatment needs and associated treatment options that likely will be required for compliance with their pretreatment or NPDES discharge permit. The array of treatment options for industrial wastewater treatment includes:

- Physical techniques, such as filtration, distillation, electrodialysis, evaporation, freezing, microstraining, reverse osmosis, sedimentation, or solvent extraction.
- Chemical techniques, such as oxidation, precipitation, coagulation, disinfection, electrochemical treatment, ion exchange and neutralization.
- Biological techniques (such as what POTWs use), such as activated sludge, waste stabilization ponds and/or land application of wastewater or solids.

For a more complete discussion of permitting requirements within Indiana, those persons proposing to build or operate a facility should consult the Indiana Code and Indiana Administrative Code and contact the Permits Branch of IDEM's Office of Water Quality at (317) 232-8706 or (800) 451-6027, ext. 2-8706.

#### *Antidegradation*

There are specific antidegradation implementation procedures that have been developed for facilities that are located in the Great Lakes basin. For more information, please refer to IDEM's nonrule policy, *Antidegradation Requirements for Outstanding State Resource Waters Inside the Great Lakes Basin*, on IDEM's Web site at [www.idem.IN.gov/4694.htm#water](http://www.idem.IN.gov/4694.htm#water).

### ■ General NPDES Permits

The Office of Water Quality's general NPDES permits-by-rule address certain classes or categories of point source discharges. Those opting for coverage of a new activity under a general permit must secure that coverage prior to engaging in that regulated activity.

To obtain a general permit, the applicant is required to file a written notification, or notice of intent (NOI), indicating to OWQ the intention to comply with the terms of a specific general permit rule in lieu of applying for an individual NPDES permit. The NOI must be submitted at least 15 days prior to any discharge. Upon receipt of the NOI, and any associated fees, IDEM reviews it for completeness and applicability. The NOI must include the name and location of the facility associated with the proposed discharge, the Standard Industrial Classification code or a description of the project, the name of the receiving waters, and a description of how the facility complies, or will comply, with the permit rules.

The NOI must be accompanied by a copy of a public notice published by the applicant in a local newspaper of general circulation. That public notice must announce both the applicant's intent to seek IDEM's approval to discharge under the general rule that specifically addresses their proposed new activity and the applicant's intent to comply with the conditions of the general permit rule associated with that discharge.

There are no public meeting requirements since the public had opportunity for comment during the rulemaking procedure that established the permit rule. However, anyone seeing the public notice may appeal to the Office of Environmental Adjudication regarding the applicability of that general permit to the specific facility proposed by the applicant.

If the facility qualifies, coverage under the general permit is issued to the applicant. The approval of coverage includes a facility identification number, describes the period of coverage, and contains a copy of the general permit rule which describes the conditions that must be met for the permittee to be in compliance. Those conditions can include requiring the development and implementation of a compliance plan, as well as record keeping, monitoring, reporting, testing or inspections.

IDEM issues letters notifying applicants of general permit coverage on the 15th day of each month. The approval to operate under the general permit becomes effective 18 days later, after affected parties have had the opportunity to appeal these approvals. Coverage under storm water runoff general permits Rule 5 (construction activity) and Rule 6 (industrial activity) commences with the submittal of the NOI.

A facility can operate under an individual NPDES permit, and one or more applicable general permits. However, discharges to a receiving stream identified as an outstanding state resource water or an exceptional use stream require an individual NPDES permit

and are not eligible for a general permit-by-rule. If it is determined that an applicant who filed an NOI for a general permit needs to instead file for an individual NPDES permit, they will be notified of such and will have 120 days to submit an application for an individual permit. General permits are non-transferrable.

### Storm Water General Permits

#### 1. Construction Activity (Rule 5):

Any persons involved in construction activities that result in land disturbance of one acre or more may be required to obtain a storm water runoff permit from IDEM's OWQ.

#### 2. Industrial Activity (Rule 6):

Storm water runoff from specific categorical industrial facilities that are exposed to storm water and have a point source discharge of storm water from the industrial activity may require a storm water runoff permit from IDEM's OWQ.

For more detailed information and links to associated rules, please refer to IDEM's Web site at [www.idem.IN.gov/4896.htm](http://www.idem.IN.gov/4896.htm).

### State Operating Permits

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In Indiana, nearly all point-source discharges to surface waters require an NPDES permit. Meanwhile, state operating permits are used to regulate water pollution control facilities not otherwise regulated by an NPDES permit. While they are not commonly used, state operating permits are issued at the discretion of the IDEM commissioner where a discharge may pose a threat to human health or the environment.

Although water discharged directly into the ground does not require an NPDES permit, it may require a state operating permit from IDEM. However, discharge by underground injection of salt or sulfur bearing wastewater and waste liquids associated with the recovery of oil and natural gas do not require a state operating permit. Just as with an NPDES discharge permit, the state operating permit may require that the effluent be treated to reduce pollutants to some environmentally based limit prior to such disposal.

Permits for deep well injection are issued by the U.S. EPA Region 5 Underground Injection Control Program. For information about discharges into deep injection wells, contact U.S. EPA at (312) 886-1492.

### Common Water and Wastewater Issues

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#### Water and Wastewater Permit Fees

For a list of fees associated with wastewater permits, refer to IDEM's Web site at [www.idem.IN.gov/4878.htm](http://www.idem.IN.gov/4878.htm).

### Water Treatment Additives

An NPDES discharge permit has specific requirements for sampling and discharge of water with additives. You are required to obtain written authorization for each type of additive you use, including when you change additives. There may also be similar restrictions for additive discharges to a POTW.

### Cleaning Equipment and Floors

Cleanders used for industrial cleaning, even if they are the same formula as standard household cleaners, are considered a non-domestic source discharge if the wastewater is generated from cleaning industrial equipment or the area around it. The reason for this is that the area being cleaned has the potential of introducing contaminants, such as machine lubricants, to the wastewater that are not typically found in household wastewater. Therefore, substances that may be in the cleaning water, and the solutions or detergents used for cleaning, must be included in the application for this wastewater discharge. It is unlikely that this discharge would be authorized to go directly into surface water or ground water without treatment. Some communities might have local requirements regarding the cleaning solutions. For example, although it is recommended that low- or no-phosphate detergents and additives be used in all areas, some communities require them to be used.

Check with your local sewer authority to see what is required.

### Cooling Water

Water used for machine cooling, solvent coolers and stills, condensers, or in heating, ventilation, and air conditioning (HVAC) systems is considered non-sanitary wastewater. This water cannot be discharged to the surface water without a permit. A discharge to the ground or ground water requires an exemption, notification, or permit. To discharge water used for cooling to the publicly owned treatment works (POTW), you must have written authorization from the local treatment authority.

Chemicals and/or biocides or algacides are sometimes used to prevent scale build-up, freezing, or slime growth. If these additives are being proposed for use and will be discharged to the ground or ground water, an NPDES discharge permit must be obtained. The permit will have specific requirements for sampling and discharge of water with additives, and some additives on the market currently cannot be discharged at all. You are required to obtain written authorization for each different type of additive you use. It is important to remember this if you change additives.

There may be some restrictions for discharges with additives to a POTW. You are required to notify the POTW each time that you switch additives.

### Floor Drains

Prior authorization or a permit must be obtained for the discharge of any fluids into floor drains that will reach ground water, surface water, or a sanitary sewer. It is unlikely that a ground water or surface water discharge permit will be issued for floor drain waste, as most of these discharges are prohibited in local building and plumbing codes. Some POTWs may accept waste from floor drains, such as antifreeze, engine washdown water, and small quantities of oily substances, at specific rates and times. Wastewater that is not authorized for discharge must be managed and disposed of as a liquid industrial waste or hazardous waste, depending on its classification.

Keep water use to a minimum when cleaning floors. Hoses should not be used to wash down the floors. Solvents should not be used for general cleaning of shop floors. Mop floors with biodegradable floor detergent according to the manufacturer's directions. Any accumulation should be recovered by a wet vacuum or mop.

Minimize or eliminate the use of degreasers and solvents where possible. Degreasers put oil into a solution, which makes it nearly impossible to remove the oil from the wastewater by conventional methods. Overuse of degreasers will make oil/water separators ineffective. Degreasers could also contain volatile organic compounds, which can be toxic and are highly mobile.

Currently, wastes entering floor drains may only be legally disposed of if the discharge goes to the following:

- POTWs with approval by the local sewer authority.
- Holding tanks, which are then pumped out with the wastewater and sludge being hauled to an approved facility. Holding tanks should be located to allow for easy access for cleaning and repair.

Any floor drains that do NOT discharge to either of the above must be closed off or rerouted to the POTW or a holding tank. Plugging the drainpipe that connects to the storm sewer/drain with concrete can eliminate the discharge. However, if the discharge access is a direct manhole into a storm sewer or drain, a cement contractor can prevent future access to the manhole by installing a lock-down cement cap. Be careful not to block drainage in an existing storm drain with cement.

For holding tanks, aboveground storage tanks (ASTs) are recommended. These allow the prompt detection and correction of any leaks. ASTs must be constructed with a material that is compatible with the waste liquids. All ASTs should also have secondary containment that is designed to allow easy access for cleaning and regular inspections (see Chapter 4). The secondary containment structure should be equipped with a sump pump to allow easy removal of collected precipitation or any waste liquids in the event of a leak. The sump pump should not activate automatically. Instead, it should allow

for the manual activation after verification that the liquid is precipitation or product. If product, the liquid should be pumped into a disposal container. Concrete vaults can be used as secondary containment if the structure is constructed with a water-stop joint design and the concrete is coated with an impermeable material compatible with the waste. Concrete vaults should not be used as the primary containment because they crack easily.

Underground storage tanks (USTs) can also be used for holding tanks. If it is made of steel, it should be equipped with cathodic protection. Double-walled tanks are recommended. They should also have a leak detection device or high-level alarm to alert of any overflows or leaks. All piping leading from the floor drains to the holding tank should be double-walled pipe. Buried pipe should also have some type of leak detection system.

### **Restrooms and Breakrooms**

Standard domestic wastewater may be discharged to a POTW, privately owned sanitary treatment system, or septic system. Pouring non-domestic wastes down the drain or in the toilet is prohibited, unless the discharge is to a municipal treatment system and is specifically authorized by the local sewer authority.

### **Spills and Other Releases**

See Chapter 8 for information regarding cleanups and release reporting requirements.

### **Pit or Trench Drain Sludge**

This type of material is the semi-liquid residue that accumulates in the bottom of trench drains or holding tanks that receive non-domestic wastewater. Trench drains or holding tanks are typically located in loading or unloading areas; they may also be located so they are convenient to receive vehicle wash water or other types of non-domestic wastewater. This waste may contain oil, antifreeze, heavy metals, degreasers, or other contaminants. As noted previously, this type of wastewater cannot be discharged to the ground, the ground water, to a septic system, or to a POTW without prior approval. This type of waste cannot be disposed in your facility's solid waste containers and must be treated as a liquid industrial waste unless the material is known to have been impacted by hazardous material, in which case it would have to be handled as hazardous waste and according to procedures outlined in Chapter 2.

If the waste is not hazardous there are three options for handling the sludge, depending on its water content:

1. Check to see if your POTW will allow you to pump this liquid into the sewer system. It may be required that the liquid portion undergoes pretreatment before disposal to a POTW. A common method of treatment is to have the liquid pass through a grit chamber and an oil/water separator.

If your facility has a grit chamber or oil/water separator, an inspection and maintenance program should be in place to ensure that the chamber/separator operates effectively. Check with your local POTW or building/zoning officer for any local requirements. The frequency of servicing is often based on the size of the separator and the volume and contents of the wastewater that flows through it.

Your program should include:

- Regular inspections;
  - Recycling or disposal of separated oil;
  - Sludge sampling and disposal; and
  - Cleaning out and refilling the chamber with water.
2. You may dry the sludge on-site. If you choose this option you must be able to dry out the material in a container of some type. You cannot dry out the material so that any liquid is allowed to impact the ground, or if not authorized, the on-site sewer system. If you are able to dry out the material in an appropriate manner, the dried sludge can then be disposed of in solid waste containers, which are subsequently directed to a licensed landfill. There cannot be any free liquid left in the sludge.
  3. You may have the sludge pumped from the holding tank by a permitted and registered liquid waste transporter for appropriate disposal at an approved facility. Under no circumstance should wastewater or pit sludge from trenches be directed into a facility's septic tank and/or tile field.

#### Power Washing

If your business is considering using a power washer, the regulations governing wastewater discharges from power washing operations depend on where the discharge is to be directed. Authorities at POTWs are responsible for regulating wastewater that is directed to their facilities. If the discharge goes to the ground or ground water it would be considered a ground water discharge and would be regulated by IDEM. If the discharge is to surface water, IDEM would have jurisdiction and the discharge would be regulated.

You must obtain permission from the POTW authority to discharge wastewater from a job site into the sewer. It is recommended that you get the approval in writing. A wastewater treatment system authority may require you to pretreat your wastewater prior to discharge into the sewer system. It is important that the POTW authority knows what and when you are discharging. Discuss with the POTW authority the proper way to access the sanitary sewer system. It's important to note that many cities have strict ordinances against accessing the sanitary sewer by lifting manhole covers.

If there is not direct access to a sanitary sewer system, another option is to collect the wastewater after arranging for disposal at the local POTW. Some POTWs have designated locations for dropping off trucked wastewater (usually called a trucked waste

disposal site). Other POTWs may require that trucked wastewater be delivered directly to the treatment plant.

IDEM does not require that a specific type of containment method be used for wastewater collection. However, if you do not have a permit, a containment system must be designed so that all of the wastewater is collected and treated. The wastewater cannot be allowed to run into a storm drain or off-site.

Depending on the type of discharge, IDEM may authorize a discharge to the ground or ground water from a power washing operation by means of an exemption, notification, or permit. A discharge is also exempt if the washing is done by a commercial operator or performed in an industrial setting to remove non-polluting substances from vehicles and surfaces, and no additives are used. Discharges must go into the ground water; they may not be directed to storm drain or surface water.

It is important to note that interior washing of vehicles is not allowed under the permit by notification. Power wash operations that do not meet the requirements for either an exemption or authorization via notification may be able to obtain a site-specific exemption or a groundwater discharge permit depending on the quality and quantity of the wastewater and discharge location.

A company wishing to discharge wastewater directly to a creek, river or other water body, directly or through a storm sewer or other conveyance, must obtain a permit from IDEM. A permit is necessary for each job site where there is to be power washing of vehicles or equipment and a direct discharge to a surface water body or a storm sewer. An NPDES permit is generally not needed for power wash discharges from routine building washdown without the use of detergents or other compounds, or pavement washing where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled materials have been previously removed) and detergents or other compounds are not used. For anything other than routine building washdown (use of power washing to remove paint is not routine building washdown), pavement washdown, and vehicle or equipment power washing, you should discuss your options with a staff member of IDEM's Office of Water Quality. Applying for an NPDES permit will likely not be a practical option for mobile power washers.

Anyone who needs to apply for an NPDES permit or who has questions on water discharges should contact IDEM's Office of Water Quality at (317) 232-8706 or (800) 451-6027, ext. 2-8706 and request to speak with staff of the NPDES program.

### Other Regulations that Might Apply to a Job Site

It is necessary to determine whether your actions generate hazardous waste. For example, if your company is power washing old paint from a building, paint chips need to be collected, evaluated, and disposed of properly. Paint chips cannot be left on the

ground at the job site. Old paint stripped off commercial buildings may contain metals (such as lead, chromium, cadmium, and mercury), causing it to be regulated hazardous waste. Another example: if solvents are used as degreasing agents, the wastewater may become a listed or characteristic hazardous waste. Additional requirements may also apply at contaminated job sites. Contact staff of IDEM's Office of Water Quality at (317) 232-8706 or (800) 451-6027, ext. 2-8706 if you have questions regarding evaluating wastes or other waste requirements that may apply.

### **Wastewater Treatment Operator Certification and Continuing Education**

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The Compliance Evaluation section of the Office of Water Quality's Compliance Branch administers the wastewater certification and continuing education programs. Industrial/commercial wastewater certification exams are offered at least once per year. Certification is offered in a variety of classifications each relating to a unit process.

Wastewater operator certification examinations are given at least once annually; they are usually in the spring and sometimes in the fall, at three or more testing sites around the state. Exams for the five different classifications of municipal wastewater operators are held in the morning, and exams for the five different classifications of industrial wastewater operators are held in the afternoon. A total of approximately 600 people sit for the exams annually. In addition to these ten different classifications, there is also the apprenticeship program to allow an individual to take the wastewater treatment operator's certification examination before fulfilling the education or experience requirements for certification.

Information is available on IDEM's Wastewater Certification and Continuing Education Web site at [www.idem.IN.gov/5088.htm](http://www.idem.IN.gov/5088.htm), and questions may be directed to (317) 232-8791 or (800) 451-6027, ext. 2-8791.

### For More Information

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Municipal and Semi-Public Permits	IDEM - Office of Water Quality <i>Municipal Permits Section</i> (317) 233-0469 or (800) 451-6027, ext. 3-0469 <a href="http://www.idem.IN.gov/4873.htm">www.idem.IN.gov/4873.htm</a>
Pretreatment Permits Program	IDEM - Office of Water Quality <i>Industrial Permits Section</i> (317) 232-8706 or (800) 451-6027, ext. 2-8706 <a href="http://www.idem.IN.gov/4882.htm">www.idem.IN.gov/4882.htm</a>
Wastewater Field Inspections	IDEM - Office of Water Quality <i>Facilities Inspection Section</i> (317) 234-2579 or (800) 451-6027, ext. 4-2579 <a href="http://www.idem.IN.gov/5089.htm">www.idem.IN.gov/5089.htm</a>
Wastewater Permits	<a href="http://www.idem.IN.gov/4869.htm">www.idem.IN.gov/4869.htm</a>

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